

REMARKS

Claims 1-19 are pending in the application. Claims 1, 12, 13, 15, 17 and 18 were rejected under 35 U.S.C. §103(a), as described in paragraphs 2-5 of the Office Action. Claims 2-11, 14 and 16 were objected to as being dependent upon a rejected base claim, but were indicated as being allowable if rewritten in independent form including the base claim and any intervening claims. Claims 1, 17 and 18 are the only independent claims.

Applicants filed an Information Disclosure Statement (IDS) on November 18, 2003. The IDS included a Form PTO-1449, listing the references attached thereto. However, the Office Action dated January 20, 2004, failed to include a signed and initialed copy of the Form PTO-1449 indicating that the references listed therein had been considered by the Office. It is respectfully submitted that the IDS was submitted in compliance with 37 C.F.R. §§ 1.97 and 1.98. Accordingly, Applicants respectfully request a signed and initialed copy of Form PTO-1449 corresponding to the IDS indicating that the references listed therein have been considered by the Office.

The present invention addresses problems different than those addressed by the cited prior art. An object of the present invention is to implement a communication system in which bandwidths are effectively utilized by reducing time for bandwidth reservation. On the contrary, an object of Giles, for example as described at the bottom of the second column of the reference, is to solve a hidden terminal problem and the problem of fair access in a peer-to-peer wireless network. An object of Elwalid, for example as described in the Summary of The Invention in column 3, is to provide allocation of process capacity to process and control messages of a router in a packet network.

Because of the differences between the object of the present invention and the objects of the cited prior art, the patentability of the present invention is evident over the combination of the cited prior art.

The transmitting station of independent claim 1 "stores a valid period of the bandwidth reserved for said transmitting station, and voluntarily and repeatedly transmits the communication reservation packet to said transmitting station during the stored valid period."

The receiving station of claim 17 comprises, *inter alia*, a storing section for “storing a valid period of the bandwidth reserved by said bandwidth reserving section for said transmitting station,” and a transmitting section for “voluntarily and repeatedly transmitting a communication reservation packet for informing said transmitting station of the bandwidth reserved by said bandwidth reserving section.”

Independent claim 18 requires, *inter alia*, a receiving section for “receiving communication reservation packets including a period of the bandwidth reserved in the receiving station and voluntarily and repeatedly transmitted by the receiving station,” and a second transmitting section for “generating a data packet based on generated data every time said receiving section receives a communication reservation packet, and transmitting the generated data packet using a bandwidth included in the communication reservation packet.”

It is respectfully submitted that neither Giles et al. (Giles) nor Elwalid et al. (Elwalid), either singly or in combination, teaches or suggest the above-identified limitations.

In paragraph 3 of the Office Action, the Examiner indicates that Giles does not disclose that “a valid period is stored at the receiver and [that] the receiver will voluntarily and repeatedly send the reservation packet the transmitting station while the valid period is still valid.”

The Examiner therefore relies on Elwalid which allegedly discloses:

“A protocol where the exchange of resource reservation information among routers in the packet network which allows for periodic refresh messages requests, or update messages, to maintain state information. Refresh messages that are not sent or processed within the period cause the established packet flow to be terminated. See col. 2, lines 10-23. Thus, connections are maintained by periodic UPDATE messages generated by the destination. See at least col. 4, lines 25-44.”

The cited portions of Elwalid disclose that a protocol for exchanging of resource reservation information among routers in the packet network and for maintaining router state information by using periodical Refresh message requests or UPDATE messages and that the refresh messages that are not sent or processed within the period cause the established packet flow to be terminated. However, the Office Action incorrectly concludes that the connection is maintained due to the

periodic UPDATE messages generated by the source. In particular, in the present invention the communication reservation packets are **voluntarily and repeatedly** transmitted by the receiving station in response to the reservation request sent by the transmitting station, and the transmitting station uses the reservation request in order to notify the receiving station of the bandwidth assigned thereto.

On the other hand, as specifically disclosed in lines 3-4 of column 4 and lines 36-37 of column 4, the UPDATE message of Elwalid **is the only message generated by the source** or destination in order to reset a refresh timer of each router. Moreover, lines 10-16 in column 4 of Elwalid indicate that:

"The source 102 desires to establish a packet flow with, for example, destination 108. The source 102 generates a PATH message requesting, for example, a connection having a specified amount of bandwidth. The PATH message is routed through the network by routers 104 and 105, for example, to the destination 108."

Therefore, a RESV packet of Elwalid is used for notifying a transmitting station of the bandwidth assigned by the receiving station in response to **the reservation request packet**. Further, Elwalid states in lines 25-27, that "when the PATH message reaches destination 108, destination 108 sends back a RESV message through the routers 105 and 104 to the source 102," and further states in lines 33-34 of column 4, that once "the RESV message reaches the source 102, the connection is established."

In light of the explicit teaching of Elwalid: the source starts to exchange packets after exchanging **one** PATH message and **one** RESV message; 2) UPDATE messages are periodically transmitted in order to refresh timers of all routers lying between the source and the destination; and 3) the UPDATE message is not (and is not similar to) a communication reservation packet of the present invention.

Clearly, Elwalid fails to teach or suggest: a receiving station that stores a valid period of the bandwidth reserved for a transmitting station, and voluntarily and repeatedly transmits the communication reservation packet to the transmitting station during the storing valid period, as required in independent claim 1; a storing section valid for storing a valid period of the bandwidth

reserved by a bandwidth reserving section for a transmitting station, and a transmitting section for voluntarily and repeatedly transmitting a communication reservation packet for informing the transmitting station of the bandwidth reserved by the bandwidth reserving section, as required in independent claim 17; or a receiving section for receiving communication reservation packets including a period of the bandwidth reserved in the receiving station and voluntarily and repeatedly transmitted by the receiving station and a second transmitting section for generating a data packet based on generated data every time said receiving section receives a communication reservation packet, and transmitting the generated data packet using a bandwidth included in the communication reservation packet, as required in independent claim 18. Therefore, a combination of the teachings of Giles in view of Elwalid additionally fails to teach that which is required in independent claims 1, 17 or 18.

Further, even if the teachings of Elwalid were combined with teachings of Giles, the resulting combination would be a communication system which could reserve a bandwidth by exchanging one reservation request and communication reservation packet between the source and the destination, in which an UPDATE message for resetting the timers of routers between the source and the destination is implemented. This fails to teach or suggest the present invention in which the receiving station stores a valid period of the bandwidth reserved for the transmitting station, and voluntarily and repeatedly transmits the communication reservation packet to the transmitting station during the stored valid period.

As a further note, the outstanding Office Action indicates that the second agent of Giles corresponds to the receiving station of the pending claim 1. Specifically, as understood in lines 18-22 in column 3 of Giles, the third agent assigns the bandwidth for the transmitting station.


In view of the above remarks, Applicant respectfully submits that claims 1, 17 and 18 would not have been obvious over the combination of Giles in view of Elwalid, and urge that the rejection of claims 1, 12, 13, 15, 17 and 18 under 35 U.S.C. § 103(a) be withdrawn.

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

Respectfully submitted,

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